

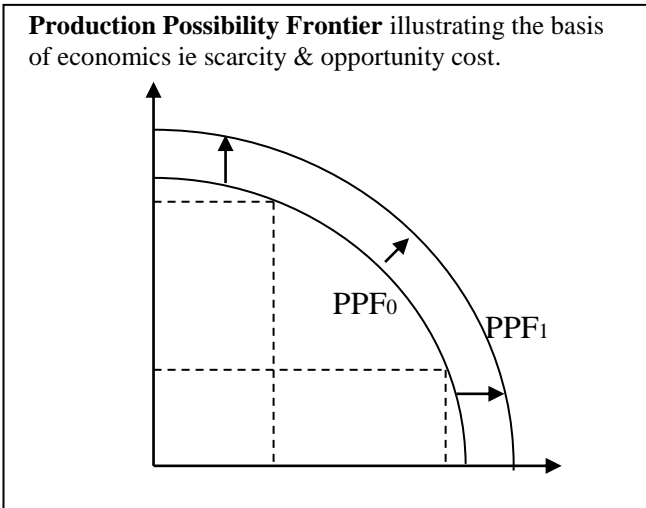
Economics

A Revision Guide

Prepared for IB Diploma
Economics (HL), but useful also
for A Level and AP Economics
students.

A. The basis of economics is the problem resulting from infinite human wants and finite resources (land, labour, capital). The economic problem can also be considered as 'what to produce, how should it be produced, and for whom should it be produced?'

Different economic systems (free market, command / centrally planned, and traditional) resolve this economic problem in different ways. Developed economies tend to be more free market, less developed economies tend to be traditional – but all economies, in reality, are a mixture, i.e. mixed economies.



A PPF can be used to illustrate opportunity cost, which is the cost of the next best alternative foregone. If land used is used for housing a cost is the lost agricultural output. But opportunity cost is the **next best** alternative ie if residential land's next most valued use is as industrial land then the opportunity cost is not lost agriculture, but lost (or foregone) industrial output.

The PPF can be used to show conditions of under-utilisation (points within the PPF), economic growth (a new curve farther out), opportunity cost (moving from one point on a curve to another and so increasing output of one at the cost of the other commodity).

Positive statements are objective, ie can be supported with evidence, eg this year's GDP is greater than last year's GDP. Normative statements are subjective. They state opinions, eg people should wear bicycle helmets.

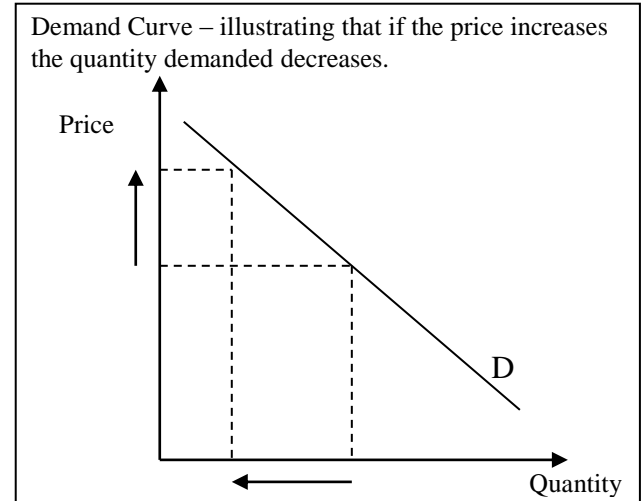
Economic goods are scarce. Demand for them is greater than their supply and so a market exists for them and they have a price, eg eggs. Free goods are those for which supply exceeds demand. Their consumption has no opportunity cost and so there is no market for them, eg sunshine, wind, sea water...

You should aim to use a PPF diagram somewhere your exam. It's a simple diagram and can be used to show several concepts in both micro and macro economics – and in the development economics section.

B. Markets are situations in which sellers and buyers meet. Price is determined by the interaction of producers / sellers and consumers / buyers. (Governments sometimes intervene in markets.)

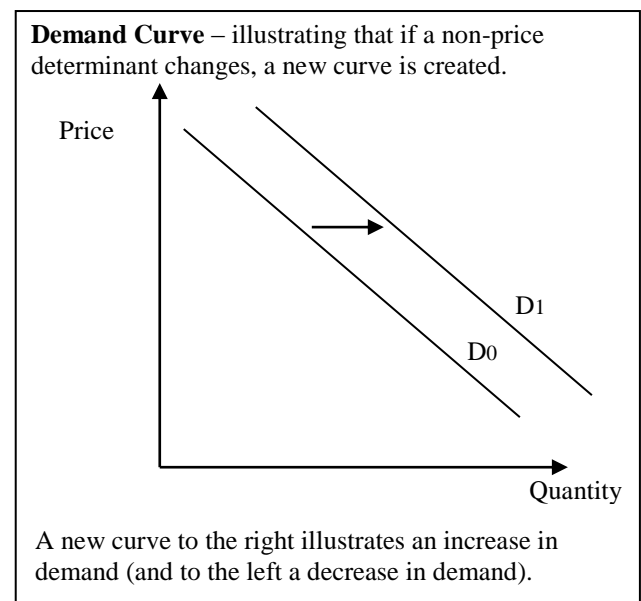
Ceteris paribus: Latin - all other things being equal. In Economics it is assumed that the effect of one factor is considered, and all other factors remain equal / unchanged, ie if the price of cigarettes increases the quantity demanded decreases – other things (such as the weather, fashion, cigar prices, remain unchanged).

Demand is the willingness and ability to buy. As the price of a good increases the quantity demanded decreases.



Demand curves slope downwards because of the income effect (as price falls, real income increases so consumers can afford to buy greater quantities) and the substitution effect (as a good's price falls it is cheaper relative to other goods / substitutes).

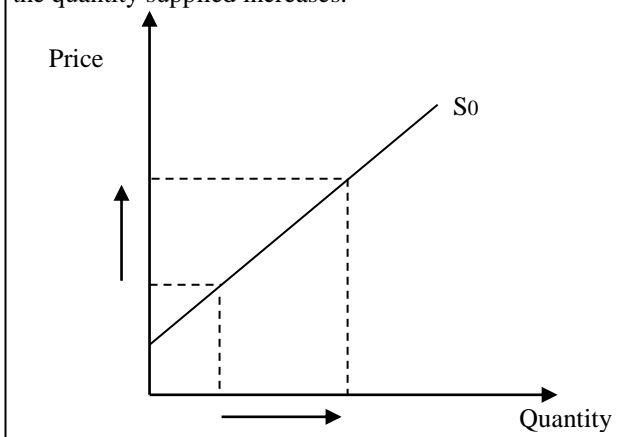
Factors other than price also affect (or determine) demand, eg income, price of complements, price of substitutes, fashions / preferences... When any of the determinants of demand (other than price) changes, a new demand curve is created...



Occasionally a demand curve slopes upwards. Veblen goods are those for which demand increases when the price increases – snob value, ‘look-at-me goods’. Giffen goods – when the price increases, consumers can’t afford other goods and so they buy more of it – ie the income effect outweighs the substitution effect.

Supply is the willingness and ability to sell. As the price of a good increases the quantity supplied increases.

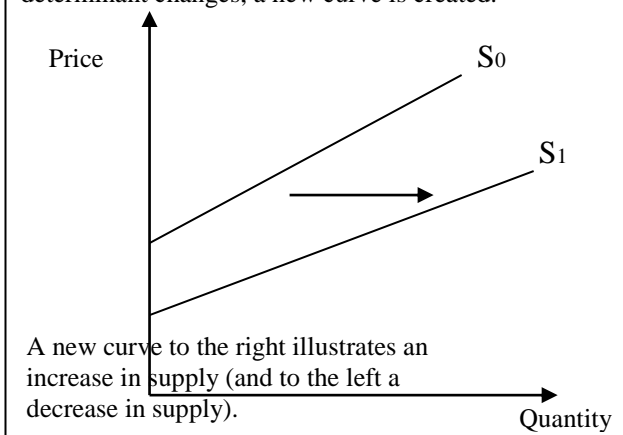
Supply Curve – illustrating that if the price increases the quantity supplied increases.



Supply curves slope upwards as the price increases because production costs remain unchanged, and so profits earned by sellers are greater at higher prices.

Factors other than price also affect (or determine) supply, eg production costs, availability of technology, taxes and subsidies, the price of alternative goods... When any of the determinants of demand (other than price) changes, a new supply curve is created...

Supply Curve – illustrating that if a non-price determinant changes, a new curve is created.

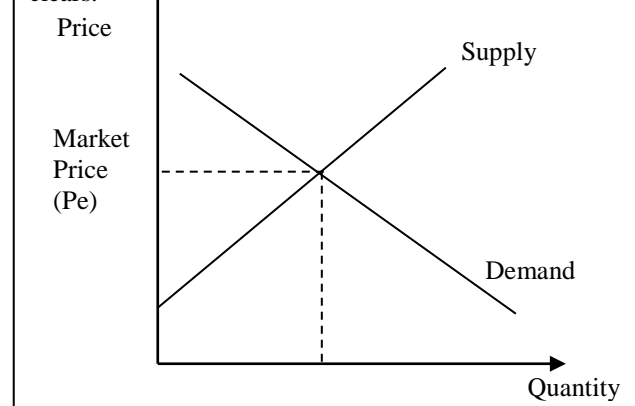


In a free market price is determined by the simultaneous interaction of supply and demand. This price acts as a signal for buyers and sellers; as an incentive to buy and sell; and as a rationing device. In this way the free market answers ‘what, how, and for whom’ question inherent to all economic systems.

Note that in diagrams solid lines represent the curves and dotted lines are used to indicate points of interest.

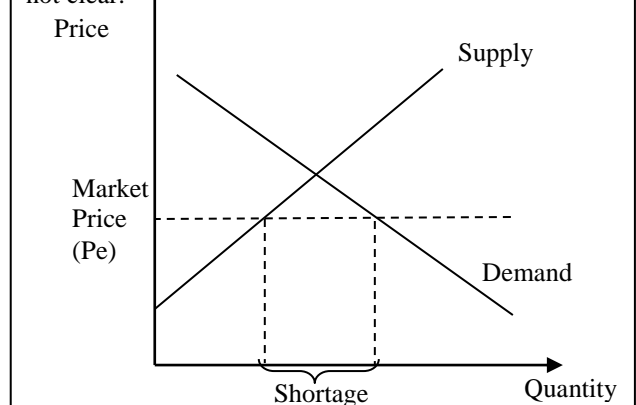
Equilibrium occurs when the quantity demanded and the quantity supplied are the same. The equilibrium price is often called the market clearing price.

Market equilibrium – illustrating that the quantity demanded and supplied are the same, ie that the market clears.



Disequilibrium is any market situation such that the quantities demanded and supplied are different – ie there is an excess demand (a shortage) or excess supply (a surplus or a glut). A surplus will cause the price to fall – sellers will lower their prices to clear their stocks (or choose not to sell and so cease to ‘supply’). A shortage will cause the price to increase as buyers increase their bid to buy (or choose to not buy and so cease to ‘demand’.)

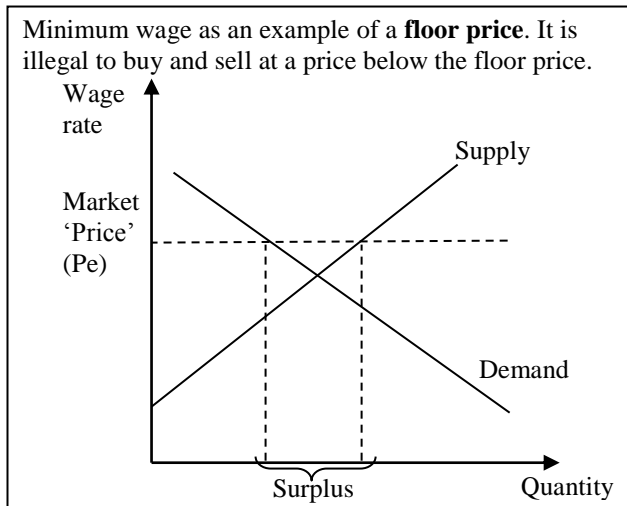
Disequilibrium – illustrating that the quantity demanded and supplied are different, ie the market does not clear.



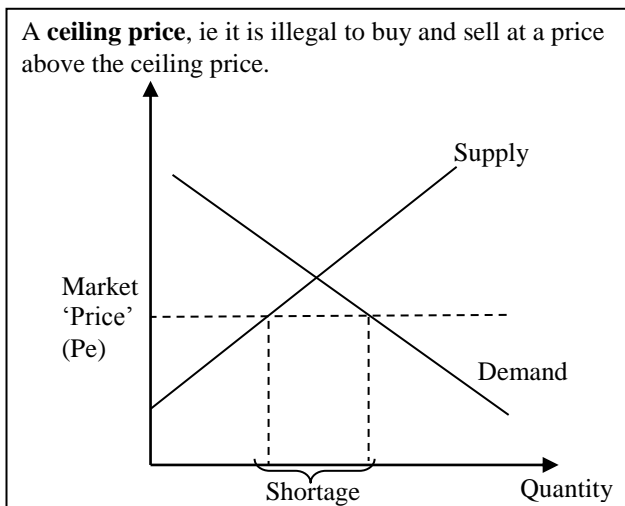
Governments sometimes intervene in markets because the market’s equilibrium may be considered unsatisfactory. Government may believe the price is too high or too low, or that the equilibrium quantity is too great or too small. Government intervention makes a free market ‘not’ free. Intervention can be in the form of floor (minimum) and ceiling (maximum) prices; indirect taxes; subsidies; quotas; and buffer stocks.

When the price changes, there is a movement to a new point on the curve. When any of the other determinants of demand (or supply) change, a new curve is created.

A movement along the demand curve is only caused by a shift of the supply curve (and vice versa).

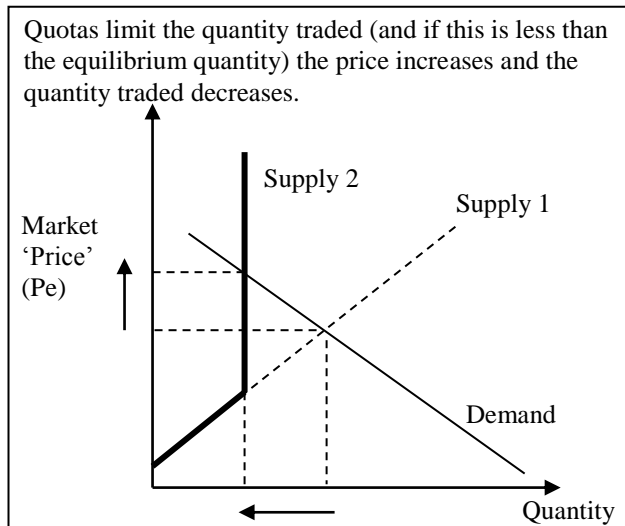


NB: To be effective, a minimum price must be set above the market price and for a maximum price to be effective, it must be set below the equilibrium price.



In both ceiling and floor pricing situations there is an incentive for a black / illegal / parallel / unofficial market to develop.

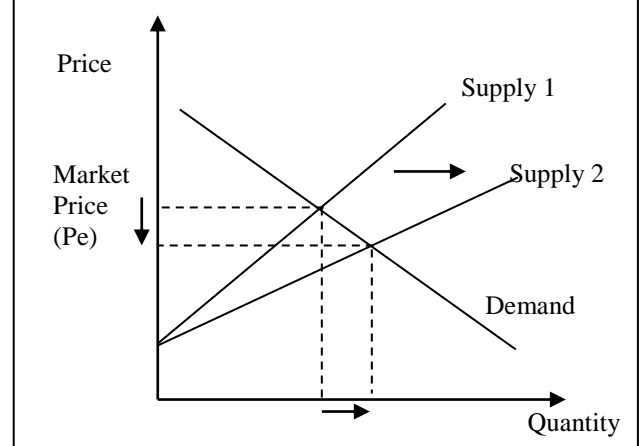
Quotas are a limited quantity of production set or determined by government. This is often used for production within the EU and is the essence of the tradeable pollution permits in The Kyoto Agreement.



Buffer stock schemes are mostly used in agricultural produce markets. To save producers from the uncertainty of fluctuating prices, the government buys the output for a predetermined price – stockpiles surpluses and sells it in seasons when there is a shortage. Typically, storage costs are significant, the product is often perishable and so doesn't store well, and surpluses and shortages don't readily offset each other. Buffer stock schemes often prove difficult and costly to manage.

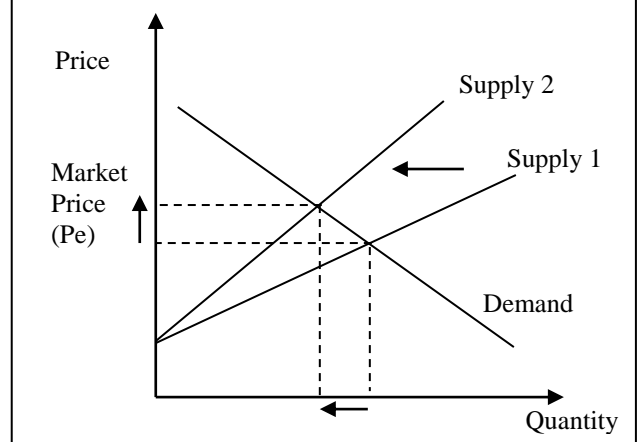
Subsidies are transfer payments made by government to producers. They...

... reduce production costs and so allow a greater quantity of the good to be traded.



Indirect (or sales) taxes...

...increase production costs, reduce supply, increase the market price, and so decrease the quantity demanded.



The burden (or incidence) of taxation i.e. how much of the tax is paid by consumers and how much is paid by producers – depends on the price elasticities of supply and demand.

There is no short cut to learning these graphs. Practise drawing them neatly and fully labelled. Draw them several times – many times. In exams, draw the graphs with a sharp pencil and use a ruler and an eraser.

Elasticity is the extent to which demand (or supply) is affected by a change in price (or another determinant). It indicates the responsiveness of one variable to a change in another variable. If the price increases, by how much does the quantity demanded fall?

Price Elasticity of Demand (PED)

$$\text{PED} = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in price}}$$

$$\text{or} = \frac{\Delta Q / Q}{\Delta P / P}$$

PED will be a coefficient. There is normally a negative relationship between price and quantity demanded. (A +ve PED indicates a Giffen, Veblen or speculative good.)

If the magnitude of the PED is

- > 1, demand for the good is price elastic
- < 1, demand for the good is price inelastic
- = 1, demand for the good has unit elasticity
- = 0, demand for the good is perfectly price inelastic
- = ∞ , demand for the good is perfectly price elastic. *The only way for PED = ∞ , is if the % change in price is 0 (i.e. the calculation includes a zero division)*

In plain language...

If a relatively small price change results in a relatively large change in the quantity demanded it means demand for the good is very responsive to price changes and this would be the case for something with good substitutes eg butter (margarine). Price inelastic means demand is very unresponsive to price changes eg demand for cigarettes – and this is because price is not an important determinant of demand for cigarette consumers.

Determinants of PED – the factors that determine whether demand for a good is elastic or inelastic with respect to the good's price include the availability of good substitutes, whether the consumer perceives the good to be a necessity or not, the % of a consumer's income / total expenditure, the time period involved.

Elasticity is a powerful exam weapon. Anytime (in micro-, macro-, and especially in International Economics) the consequences of supply & demand are discussed, elasticity should be too.

Cross Elasticity of Demand (XED)

Indicates the responsiveness of demand to changes in the price of another good and so determines whether goods are substitutes or complements.

$$\text{XED} = \frac{\% \text{ change in quantity demanded (of good A)}}{\% \text{ change in price (of good B)}}$$

If XED is +ve the goods are substitutes and the higher the number the better they are as substitutes. If XED is negative

the goods are complements and the higher the number the more closely the two goods are consumed together.

Income Elasticity of Demand (YED)

YED indicates whether goods are luxuries, normal goods or inferior goods.

$$\text{YED} = \frac{\% \text{ change in quantity demanded}}{\% \text{ change in income}}$$

When income increases the demand for a normal good increases but demand for an inferior good decreases. If YED > 0 means normal, YED < 0 means inferior. A luxury good is one for which demand increases by a greater percentage than the increase in income (i.e. YED > 1)

Price Elasticity of Supply (PES)

PES indicates how responsive supply is to changes in the price.

$$\text{PES} = \frac{\% \text{ change in quantity supplied}}{\% \text{ change in price}}$$

If PES is > 1 supply is price elastic, i.e. very responsive. If PES is < 1 supply is inelastic, i.e. not very responsive. If PES = 1, unit elasticity, PES = 0 perfectly inelastic and ∞ means perfectly elastic.

Determinants of PES

The time period. In the immediate short-run (sometimes called the moment) production cannot respond to price changes so PES = 0. In the short run, when at least some inputs cannot be changed PES < 1 i.e. supply is relatively inelastic. In the long run, when all factors are variable, PES > 1 and so supply is very responsive to price changes, i.e. elastic.

The amount of available capacity. If the firm is fully utilising its resources it cannot expand output. If there is spare capacity it can increase supply.

The level of stocks / inventory

If the firm keeps a large inventory on hand it can increase supply quickly. If it produces just enough then increasing output is more difficult.

NB: Elasticity is NOT the same as the slope / gradient of a curve. The value of elasticity will differ at different points on a curve.

Market Failure is any situation in which the market mechanism fails to allocate resources efficiently and is often the reason / argument for government intervention. The four general types of failure:

- Externalities
- Public goods
- Merit / demerit goods
- Monopoly power

(Income and wealth inequality is often also considered a failure of the market system.)

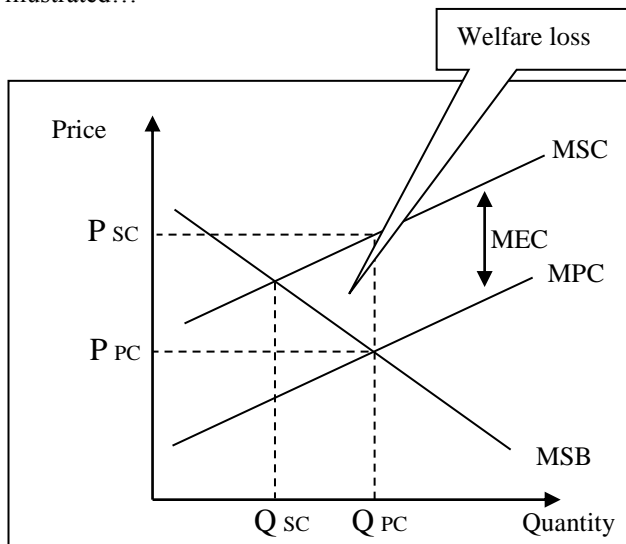
Always try to use graphs in exam answers. Make them large, and label them clearly. Practise drawing them.

1. Externalities are market failures because all the costs of production or consumption are not incurred by the producers and consumers - or all the benefits of production or consumption do not accrue to the producers and consumers. Negative externalities are costs and positive externalities are benefits. Externalities are experienced by third parties (stakeholders other than the producers and consumers).

Environmental pollution is a typical example of a **negative externality**. In a free market the supply curve indicates the MPC (marginal private cost) and it does not incorporate the MEC (marginal external cost) – the externalities. The true cost to a society or the MSC (marginal social cost) of producing a good is the sum of private costs and externalities.

$$\text{MPC} + \text{MEC} = \text{MSC}$$

If the market accounted for all costs (MSC and MEC) then output would be less, the price would be higher. This overproduction's cost to society is called welfare loss and is illustrated...



Governments can impose an indirect tax on the production of such a good and so increase the MPC to the value of MSC which would result in decreased output. Petrol taxes are an example of this. There are problems with taxing though: it is difficult to calculate the monetary value of a spillover (negative externality); demand for the goods may be inelastic in which case output / consumption will not be greatly affected; sales taxes tend to be regressive so poorer people suffer most; exports may become less competitive; and black markets may be created.

Governments may also create **tradable permits** – eg the carbon emissions rights from the Kyoto Agreement and fishing permits / quotas. A tolerable amount of output is determined and then units of “permissions” or permits are created and bought.

Governments can also simply make **regulations** that set optimum levels of output in some markets and fines imposed on those who break the regulations.

Perhaps the most effective method is for governments to **educate** people and so encourage informed and socially responsible buyer behaviour.

NB: Externalities are most problematic in developing countries where the governments are less able to create and manage solutions (or perhaps less willing).

2. Public goods are not provided by the free market because of their main features: non-excludability and non-rival in consumption. Non-excludability means that once the good is produced consumption cannot be prevented, ie one consumer cannot exclude others. Non-rival in consumption means that if one consumer consumes a good others can still consume it. Examples include public street lighting, lighthouses, and national defence. In a free market producers do not produce public goods because they cannot make a profit from them. (**The free rider problem** is the issue of consumers benefiting without paying.)

3. The market fails in the provision of merit / demerit goods because some consumers consume them in quantities that society (or government) believes is wrong. Consumers consume too few merit goods such as education and preventative health care and exercise. Consumers consume too many demerit goods such as tobacco and high-fat foods.

Taxes and subsidies can be applied but education and information programmes are probably more effective because the essence of the under- and over-consumption of these goods is poor consumer decision making.

DO NOT CONFUSE MERIT GOODS WITH GOODS WITH POSITIVE EXTERNALITIES AND DEMERIT GOODS WITH GOODS WITH NEGATIVE EXTERNALITIES. There is often an overlap but they are not synonymous.

4. Monopoly power

A monopoly is a market situation in which there is just one producer / seller of a good or service. A perfectly free market requires many buyers, none of whom can affect the market's equilibrium price / quantity – and a many sellers, none of whom can affect the market's equilibrium. A monopoly, with its one seller, is not a perfect market and the one seller can determine the market price. Monopolies tend to result in higher than equilibrium prices, lower than optimum output and so a decrease in economic efficiency (but not always).

Many governments do not allow monopolies because they can result in unsatisfactory market conditions for consumers. They have organisations / departments that investigate mergers and takeovers and prohibit those that may result in excessive market power.

5. Income and wealth inequality may or may not be considered a failure of the free market. Many free market economies have a wide range of incomes and wealth. Some argue that the ability to accumulate large wealth acts as an incentive. Is it a market failure – or is it a desirable outcome? Taxes and transfer payments / welfare benefits partially reduce income and wealth inequalities.

C. Business Economics

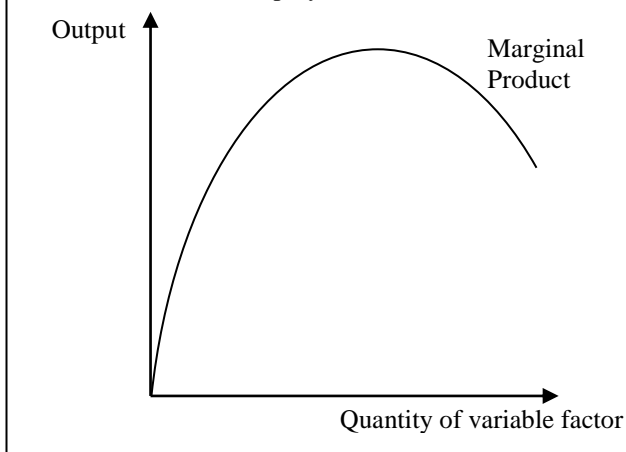
Businesses aim to maximise profits. Yes, there are other possible aims such as sales maximisation, market share, prestige, social responsibility etc – but in Economics we assume profit maximisation is the main business goal.

Costs

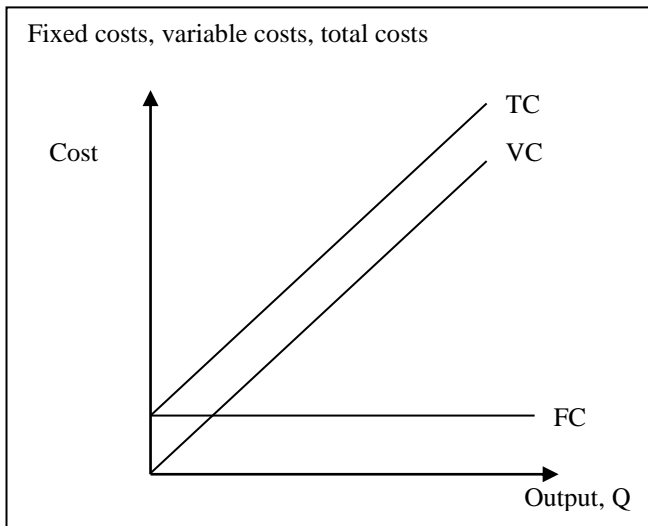
Firms are combinations of the four factors of production (land, labour, capital and enterprise), which are transformed into output. Factor costs are incurred (rent, wages, interest and profit). At least one of the factors is fixed, ie cannot be increased or decreased in the short run (the time period in which at least one factor is fixed.) In the long run the amount of each factor used can be increased or decreased.

The law of diminishing returns states that as successive units of a variable input (eg labour) are added to a fixed input (eg a machine), the extra or marginal output (or product) will increase and then, eventually, decrease.

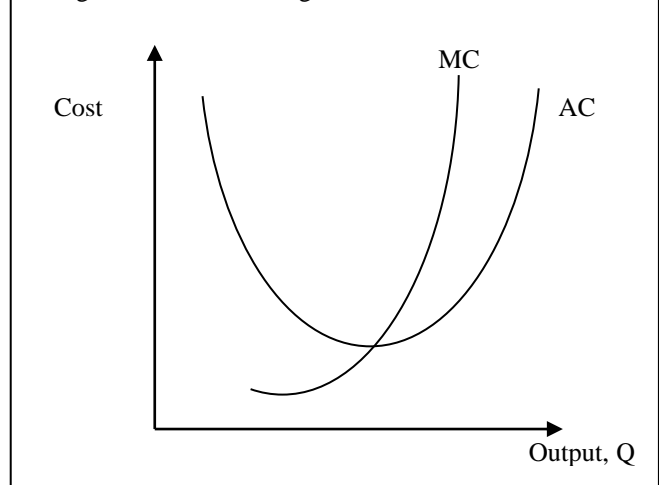
An increase in AD will increase national income (Y), which will increase employment.



Fixed costs (FC) are the cost of producing zero output. They are costs that do not increase or decrease with different levels of output (Q) eg the cost of renting a factory. Variable costs (VC) increase when output increases. Average cost (AC) is the total cost per unit, or each unit's share of the total cost (TC). Marginal cost (MC) is the addition to total cost resulting from producing one more unit of output.

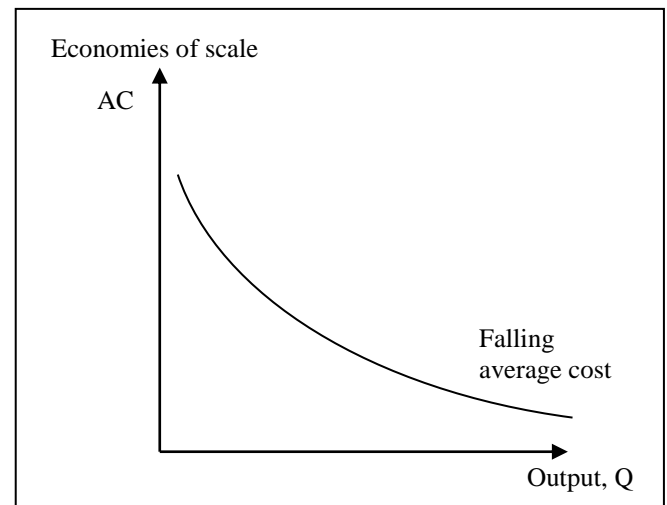


Marginal costs and average costs



Practise drawing this diagram. It's critical that the curves intersect as shown – ie at the AC's minimum point. (While $MC < AC$, AC is decreasing.) Average costs increase only when the marginal cost is greater than the average cost.

Economies of scale occur when average cost falls. At higher levels of output fixed costs are 'shared' by many levels of output. This is the basis of mass production – fixed costs such as a car factory are spread over or borne by many units of output. The cost per unit of the fixed cost is less.



Economies of scale occur because of financial, marketing, technical, purchasing, and managerial reasons.

Diseconomies of scale can also occur – at high levels of output, the average cost increases, often because of communication difficulties, overcrowding etc.

Revenue

Revenue is a firm's income.

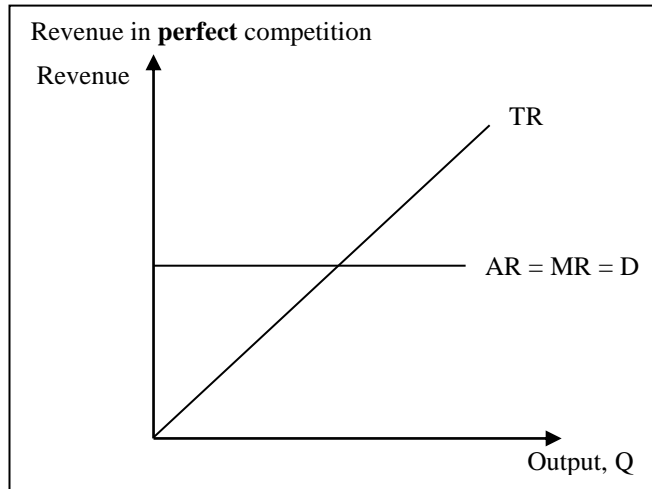
$$\text{Total Revenue (TR)} = \text{Price (P)} \times \text{Quantity (Q)}$$

$$\text{Average Revenue (AR)} = \text{TR} / Q$$

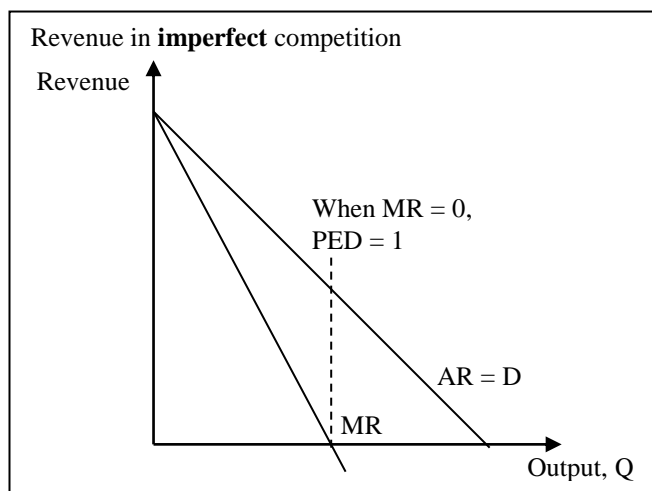
Marginal Revenue (MR) is the increase in TR as a result of the last unit sold.

The shape of a firm's revenue curves depends on whether the firm is a perfect or imperfect competitor.

In perfect competition there are many sellers none of whom can affect the market price. Imperfect competition is any market situation that is not perfect (including monopoly, oligopoly, monopolistic competition). In perfect competition, firms are price takers and the price is constant.



In imperfect competition, the firm is a price maker and it can affect the price and, to maximise profits, it will. Consequently, the imperfect competitor faces a downward sloping demand curve and decreasing average revenue as output increases.



Profit

$$\text{Profit} = \text{TR} - \text{TC}$$

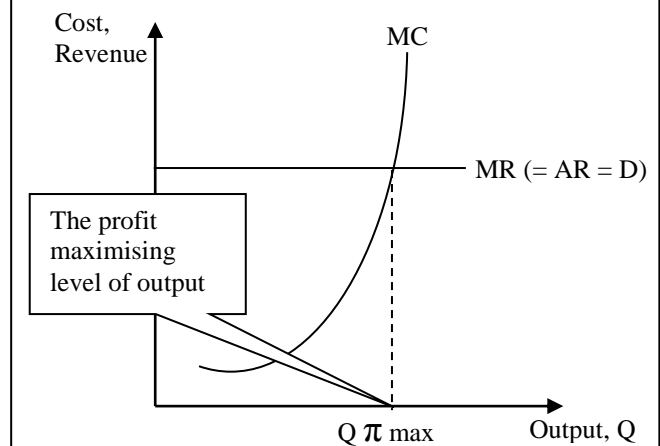
NB Economic profit is different to accounting profit. Economic profit acknowledges that profit paid to the entrepreneur is a legitimate business cost. So zero economic profit includes a return to the risk taker / owner while a zero accounting profit means nothing is paid to the owner / entrepreneur.

When $\text{TR} = \text{TC}$ normal profit results. When $\text{TR} > \text{TC}$, supernormal profit results and when $\text{TR} < \text{TC}$ subnormal profit results.

Profit maximisation is the goal, ie maximising the difference between TR and TC. Businesses will increase production as long as successive units of production's cost (MC) is less than its contribution to total revenue (MR).

Read the previous paragraph again – it's the essence of this whole unit of business economics.

Profit is maximised when $\text{MR} = \text{MC}$



Market situations

Perfect competition

Imperfect competition

-Monopoly, Duopoly, Oligopoly, Monopolistic competition

For **perfect competition** to exist there must be many sellers with no barriers to entry or exit, perfect knowledge, all offering a homogeneous product and the goal of profit maximisation. In this situation, because of these conditions, firms are price takers, ie none can affect the market price.

The sum of individual firms' profit maximising level of output is the market equilibrium quantity and the market equilibrium price is the same as firms' $\text{MR} (= \text{AR})$. In perfect competition, firms make a normal profit, ie they make just sufficient profit to stop them from leaving the industry for better returns elsewhere. (Supernormal profits are not possible in perfect competition. They are only possible in imperfect competition.)

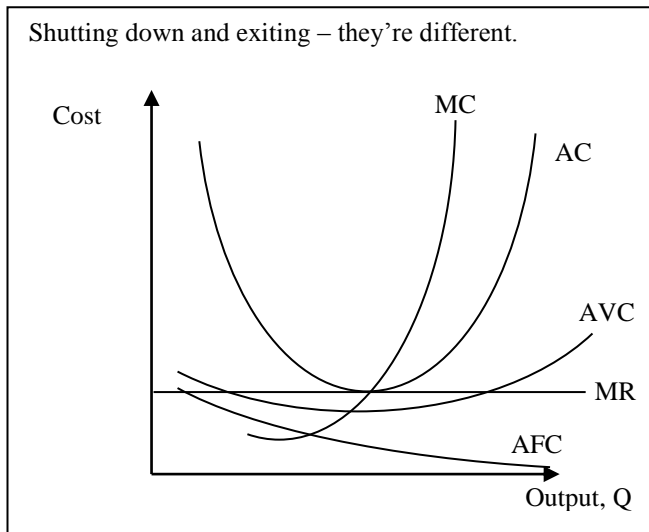
At long run equilibrium $P = \text{AR} = \text{MR} = \text{MC} = \text{AC}$ and both allocative and productive efficiency are achieved. Allocative efficiency is when $\text{MR} = \text{Price}$. Productive (technical) efficiency is when AC is minimised.

Pareto efficiency is when the allocation of resources is such that no one can be made better off without someone else being made worse off.

Monopolistic Competition (only rarely appears in the IB exam) is almost perfect competition ie many sellers, perfect information etc. but the product can be differentiated. It tends to be a short run situation because supernormal profits attract new firms and the increased supply drives the price and so MR down to the normal profit level.

This paragraph is the essence of this whole Business Economics section. It applies to all firms in all market structures. Profit is maximised when $\text{MR} = \text{MC}$.

In perfect competition a firm's MC curve is its supply curve. Firms will continue in business in the short run as long as their average variable costs are being covered ie ($MR > AVC$). Shutting down simply means producing zero output. It doesn't mean exiting the industry.

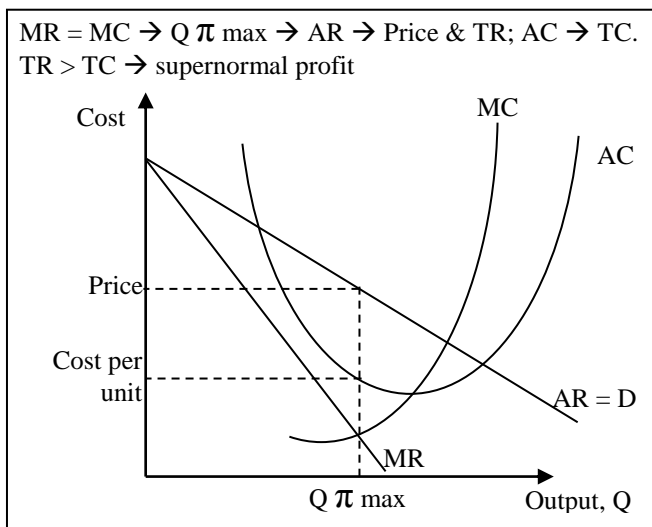


Firms will exit the industry if their average costs are not being met ie if $MR < AC$.

A pure **monopoly** is a market in which there is only one seller. The product sold is unique and has no substitutes and there are barriers to entry (legal, economies of scale, technical, control of inputs etc). A monopolist aims to maximise profit.

The firm, the monopolist, is the market supplier, ie the individual supply curve is the market supply curve and the firm's AR and MR curves will be downward sloping (compared to the perfect competitor's horizontal / flat AR and MR curves.) The barriers to entry prevent competitors from entering the market. The firm can charge a higher than normal price and so enjoy supernormal profits without threat of competition.

A monopolist's profit is maximised when $MR = MC$ (as is the case for all firms in all market situations).



To read / analyse the diagram above, follow these steps...

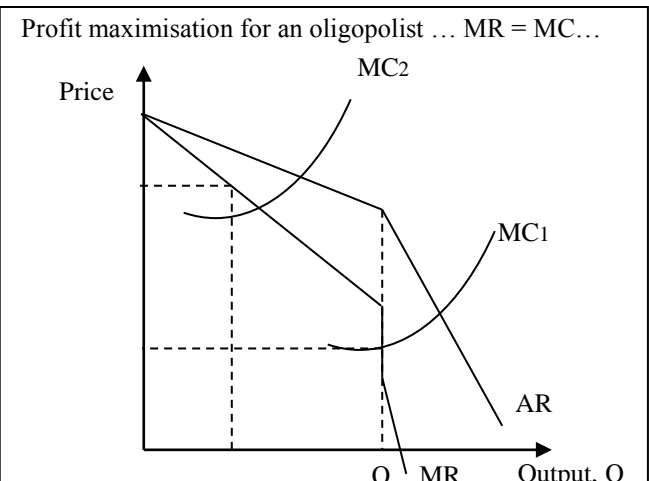
1. Identify the profit maximising level of output (directly down from the intersections of the MR and MC curves)
2. Identify total revenue – the area $AR \times Q$
3. Identify total cost – the area $AC \times Q$
4. Compare TR and TC – which is greater?

$P > MC$ meaning consumers are willing to pay more for a product than it costs to produce it. Q is not at AC's minimum so the firm is not producing at its most efficient level of output. A monopoly is considered bad (a market failure) because it is neither allocatively nor productively efficient, and there is a welfare loss (compared to a perfectly competitive market situation). *NB A monopolist that aims to maximise output will produce where $AC = AR$. If it aims to maximise revenue it will produce at $MR = 0$.*

Economies of scale can allow a monopolist to sell at $MR = MC$ even at a price lower than that possible under perfect competition. A monopoly may also be beneficial (or preferable to perfect competition) if supernormal profits are used for research & development; and for increased employment and export revenue. Natural monopolies (in which one large physical network such as pipelines or power lines exist) may be inherently more efficient than perfect competition.

In an **Oligopoly** market situation a few large firms operate. Barriers to entry exist, non-price competition, collusion and interdependence are frequently observed.

The oligopolist faces a kinked demand curve because once a price is determined the firm will tend to neither increase nor decrease its price. If the firm increases its price, other firms will not so the firm will lose revenue because demand is price elastic. However, the firm will not decrease its price either because if it does other firms will decrease their prices and revenue will fall because market shares will stay constant.



Price Discrimination occurs when different consumers are charged different prices for the same good eg cheaper movie tickets for students. Firms price discriminate to exploit consumers' differing willingness to pay. To be able to use price discrimination firms must have some monopoly power, there must be no possibility for low-price consumers to resell the good to high-price consumers, and different groups of consumers must be readily identifiable.

D. Macroeconomics

National Income Accounts

National Income = National Expenditure = National Output
(*well, they do in theory*)

Income method = Sum of payments to the factors of production (rent + wages + interest + profits).

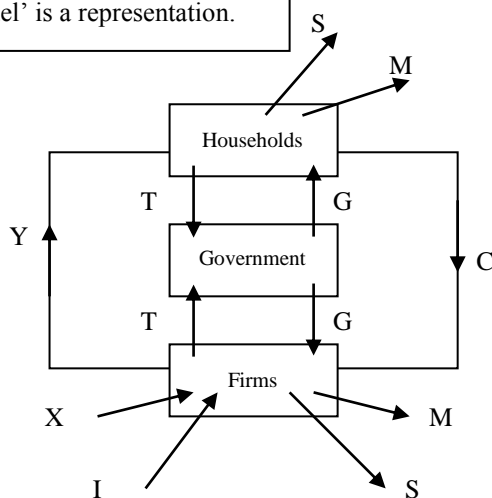
Output method = the value of final output produced by various industrial sectors.

Expenditure method = $GDP = C + I + G + (X - M)$
 C = consumer spending, I = investment spending, G = government spending, X = export receipts, M = import payments

Some other terms:

Net = Gross – depreciation (capital consumption)
 National = domestic + net property income from abroad (as used in GNP and GDP)
 Factor cost = market prices – indirect taxes + subsidies
 Real national income = nominal national income – inflation (ie inflation-adjusted)
 National income per capita = national income / population

The Circular Flow Model(s) – a 'model' is a representation.



S = Saving; M = spending on imports; T = tax payments / receipts; G = government spending (welfare payments, subsidies); X = export receipts, I = investment / borrowing; Y = national income; C = consumer spending

Injectors (J) flow into an economy and **withdrawals (W)** flow out of an economy.

$$\begin{aligned} J &= G + I + X \\ W &= T + S + M \end{aligned}$$

National equilibrium occurs when $J = W$ (this shouldn't be confused with full employment equilibrium).

The **multiplier** is the factor by which a change in injections or withdrawals affects national income, ie a 1% increase in injections affects national income by x%? The accelerator

is the factor by which consumer spending is increased as a result of a 1% increase in investment spending.

A change in investment will cause a change in national income (the multiplier) and a change in national income will cause a change in investment (the accelerator).

Governments have 5 economic goals or objectives

Economic growth and development

Full employment (of all resources not just labour)

Price stability (low inflation)

External equilibrium (a balanced balance of payments)

An equitable distribution of income and wealth.

NB Policies that improve some objectives make others worse.

The AD-AS Macroeconomic Model

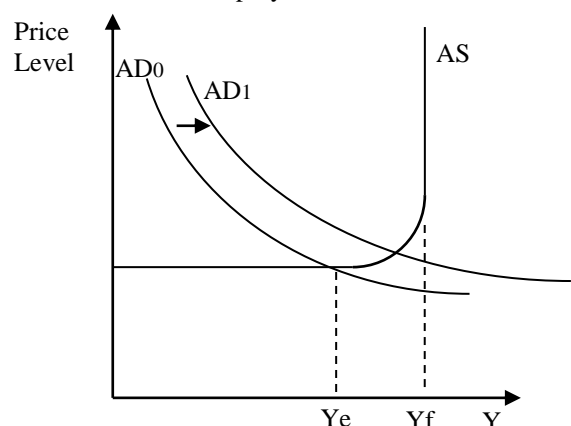
another representation of the macro economy

AD (aggregate demand) is the sum of all demand curves, and AS (aggregate supply) is the sum of all supply curves. AD is the sum of consumer spending (C), investment spending (I), government spending (G) and net exports ($X - M$). AD is the economy's total demand for all goods and services. If any of C, I, G, X, M change, a new AD curve occurs. For example, an increase in G (expansionary fiscal policy) will increase AD.

AS is the sum of an economy's supply. The curve represents the value of all goods and services that an economy can produce in a given time period. In the short run the AS curve slopes upwards – as prices rise, producers supply more because they can make higher profits. In the long run the AS curve is vertical – the economy is at full capacity. The AS curve will shift outwards as a result of improved production technologies / methods, decreased labour costs or increased labour productivity.

The macroeconomic equilibrium level of national income (Y_e) is where AD and AS are equal.

An increase in AD will increase national income (Y), which will increase employment.



Drawing diagrams with curvey things in them takes a lot of practice to get them looking accurate. Practise drawing them. In the exam use a sharp pencil, a ruler for straight lines and have an eraser handy.

Note that the inflationary impact of an increase in AD depends on where the AD curve intersects the AS curve – on the horizontal section or on the increasing section. If it is on the horizontal section, well below the full employment level of Y then there will be no impact on inflation.

The previous diagram uses the Keynesian view of an AS curve. Monetarists believe that an economy is always at full employment, illustrated with a wholly-vertical AS curve. The most significant implication is that all increases in AD will be inflationary.

The aim, then, is to increase national output (Y) ie to generate economic growth with equal increases in both the AD and the AS curves.

Unemployment & Inflation

‘Unemployed’ are people registered as willing and able to work at the market wage rate, but who cannot find employment. Unemployment is measured in several different ways: the number of people registered with job agencies; the number of people receiving unemployment welfare; the Household Labour Force Survey... Unemployment represents a loss of potential output for an economy and a waste of an economic resource; a cost / loss to an economy if welfare payments are made to unemployed people; reduced consumer spending; and possibly / arguably social problems.

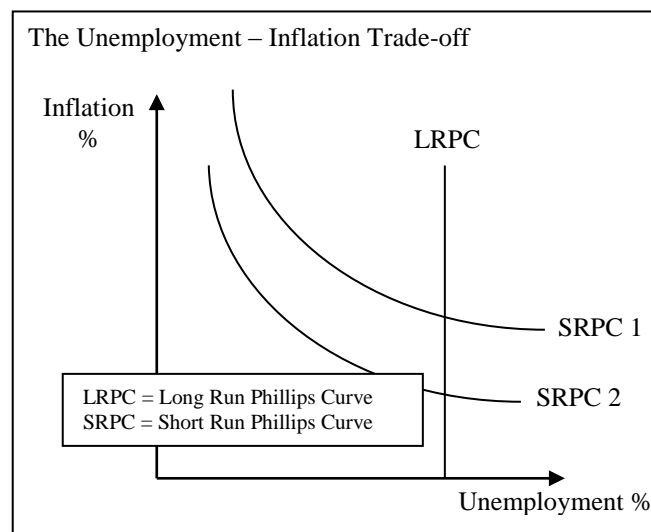
Types / causes of unemployment include: seasonal (esp. agriculture); structural (when the economy’s fundamental economic activity changes); cyclical (the business cycle)... Voluntary unemployment relates to supply side policies – incentives to work, disincentives to be unemployed, labour mobility, education & training. Involuntary unemployment relates to demand-side policies – fiscal and monetary policy.

There is thought to be a natural rate of unemployment at the full employment level of output.

Inflation is a continuous rise in the general price level over time. It is measured with a weighted basket of representative goods and services – representing the average consumer’s cost of living. Inflation is problematic because it redistributes income from savers to borrowers and erodes the buying power of fixed incomes ie pensions. It devalues money and so creates ‘menu costs’ for businesses and ‘shoe-leather costs’ for consumers. Inflation is a disincentive for savers and encourages wage demands (and often industrial disputes). Countries become less competitive globally.

There is cost-push inflation caused by rising raw materials prices; rising wages, and increased sales taxes – (illustrated with an increasing / outward-moving AS curve). There is demand-pull inflation caused by reduced income taxes and so increased disposable incomes, increased Government spending, reduced interest rates, rapid increases in the money supply, growth in other countries, depreciation of exchange rate - (illustrated with an increasing / outward-moving AD curve).

Inflation can be ‘cured’ with contractionary fiscal and monetary policies. Of course, this will slow economic growth and cause unemployment. Sustained economic growth without inflation requires AS and AD to increase at the same rate.



Increases in AD to reduce unemployment won’t cause inflation while the economy is below full employment. At full employment though any increase in AD will cause inflation, and so supply-side policies should be applied, not demand side policies.

The 2 Demand Side Macroeconomic Policies

Fiscal policy is the use of government spending (G) and taxation (T) to generate economic growth (ie to increase AD) – and to achieve the other economic aims. Fiscal policy tends to be slow for the effects to be felt. Budget deficits can cause interest and tax rates to increase.

Crowding out: if the government increases investment spending to stimulate economic growth, interest rates increase and so private borrowing for investment is discouraged.

Monetary Policy uses the interest rate to affect AD by adjusting the money supply. But investment / borrowing depends on more than the interest rate (ie expected rate of return, expected profit from investment). Monetary Policy is relatively quicker than Fiscal Policy.

Expansionary fiscal or monetary policy aims to increase economic growth and reduce unemployment but may cause inflation and create income / wealth inequalities. Contractionary policies would limit inflation, but would also limit economic growth and employment.

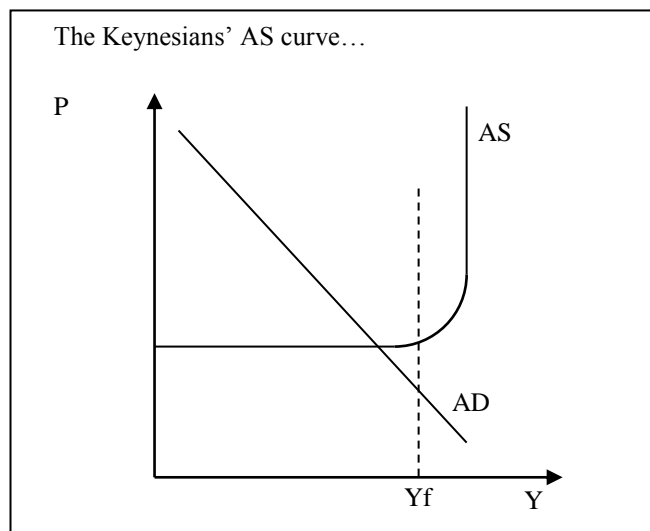
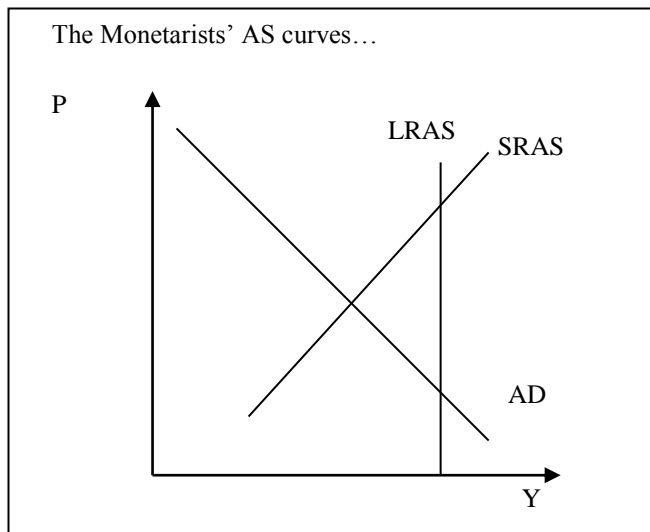
Supply-Side Policies aim to increase an economy’s output by increasing: incentives to work (and decreasing disincentives to work); labour mobility; labour productivity; and investment, innovation and entrepreneurial spirit.

Policies focus on microeconomics, ie reforming Trade Unions; privatising state-owned enterprises; improving access to better education & job training; cutting income taxes and reforming welfare benefit schemes to encourage

work; establishing minimum wage rates (higher than welfare levels).

More on the Keynesian – Monetarist Debate

Keynesians believe that markets are slow to adjust (sticky); an economy can be in equilibrium below full employment; governments can (and should) intervene to stabilise a economy; and fiscal policy is more effective than monetary policy. **Monetarists believe** that markets work; economies naturally tend toward full employment; inflation is caused by excess money supply; and that governments should intervene only to control inflation by controlling the money supply. Keynesians and Monetarists differ in their opinion of the shape of the AS curve.



As a result, Keynesians believe that an increase in AD will not result in inflation as long as the economy is operating below full employment. Monetarists however believe that any increase in AD will result in inflation so growth should come from supply-side policies that will increase AS.

Neither Keynesians nor Monetarists are right for all situations all of the time. Some of each argument may be right in some situations some of the time. It's not a black & white argument.

E. International Economics

Countries trade because:

- economic welfare can be increased by specialising in production of goods in which a comparative advantage exists (resulting in economies of scale);
- exports increase a country's income;
- imports can be bought that couldn't otherwise be produced domestically and so consumers have a wider choice;
- it stimulates innovation and entrepreneurship.

A country has an **absolute advantage** if it can produce a good using fewer resources than another country. A country has a **comparative advantage** if it can produce a good at a lower opportunity cost than another country.

The **terms of trade** indicates the rate at which one country's exports exchange for another country's exports.

$$= \frac{\text{Index of Export Prices}}{\text{Index of Import Prices}} \times \frac{100}{1}$$

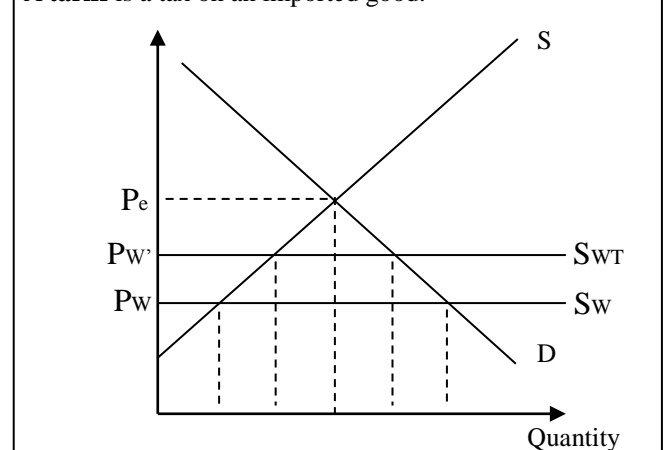
The **Free Trade versus Protectionism** Argument:
For Protectionism...

- The infant industry argument
- Anti-dumping
- Protecting local employment
- Balance of Payments issues
- Externalities and demerit goods
- Strategic / political reasons
- Comparative advantage theory isn't realistic

For Free Trade

- Loss of comparative advantage
- Cost to consumers
- Loss of competitiveness and efficiency
- Governments are poor decision-makers
- Can generate retaliation / trade wars

A **tariff** is a tax on an imported good.



The tariff results in a higher selling price for the imported good as well as revenue for the government (how much revenue depends on elasticities). The locally-made substitutes become more price competitive.

Quotas, subsidies, red tape (administrative barriers) and bi-lateral, government-initiated trade restrictions are also protectionist measures available to governments / economies wanting to protect their local industries. But these tend to be short-term measures with short-term benefits and the benefits aren't always equitable within an

economy. Consumers often face price increases and restricted availability of goods. And there is always the risk of retaliation by trading partners.

Trading blocs such as the EU and NAFTA are groups of countries that trade freely among themselves but impose barriers and restrictions to countries outside the bloc.

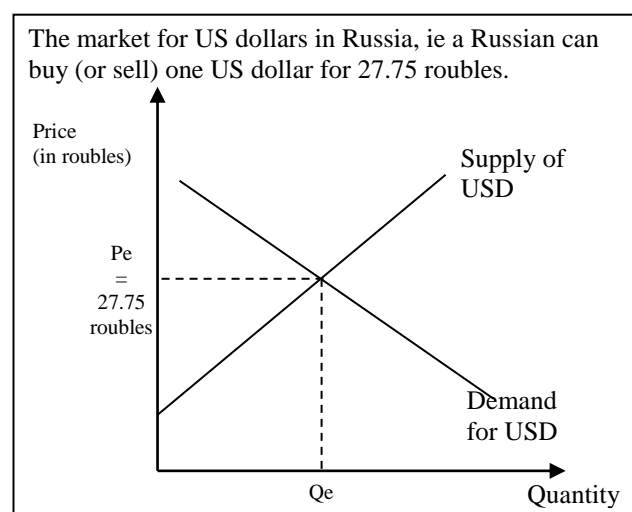
The **WTO** (World Trade Organisation) oversees world trade (of its member countries). The WTO aims for free world trade. Developed countries are strongly discouraged from imposing trade barriers such as tariffs. Developing countries often complain that developed countries impose less obvious trade barriers such as establishing ethical trade standards as a way to prevent trade and bureaucracy. Typically, developing countries have very poor working conditions and low production costs and so can produce at considerably lower costs than developed countries.

The **Balance of Payments** is a summary or final account of a country's financial transactions with the rest of the world. The current account details trade in goods and services and net investments and transfers. The capital account details capital flows (ie shares, government debt receipts and payments and foreign investments in and out of the country). The Balance of Payments must balance. A current account deficit is funded by a capital account surplus, which can either come from overseas investment or from the government selling foreign reserves.

NB Don't confuse a balance of payments deficit with a government / budget deficit – which is a shortfall in government revenue from taxation etc. compared to government's spending on welfare and public goods etc.

An **exchange rate** is the rate at which one currency exchanges for another's currency. It is the price of one country's currency expressed in terms of another.

The market for US dollars in Russia looks like this...



In the Russian market for US dollars, demand for currency (USD) is determined by the demand for US exports (imports from the US to Russia, including Russian tourists to the US), flows of investment money to the US (buying shares in the US stock markets etc), the Russian Central

Bank's official purchases of USD for economic / political / strategic reasons, (and a relatively small amount of speculation on exchange rate movements).

The supply of USD is determined by the demand for Russian exports to the US (ie the import of Russian goods by the US), investment flows (US investors buying Russian shares, properties etc), the US Central Bank buying roubles for economic / political / strategic reasons, and some speculations.

Just as increases or decreases of supply or demand affect the price in a commodity market, they also affect the price in a currency market such as the market for US dollars in Russia.

Some reasons why exchange rates (the price of a currency) increase or decrease...

Monetary policy that increases interest rates will attract investment from countries with relatively low interest rates because the rate of return will be higher. Countries with sound fiscal policy, ie countries that have stable economies will tend to attract investors looking for safe investments. Economic growth may increase the demand for imports and so depreciate the country's currency.

It is easy to become confused when writing about exchange rates. There are two exchange rates and they are reciprocals so when one increases the other decreases. $1 \text{ USD} = x \text{ RUR}$ & $1 \text{ RUR} = x \text{ USD}$. Today $1 \text{ USD} = 27 \text{ RUR}$ ie $1 \text{ RUR} = .0370$. Both 27 and .0370 are 'the exchange rate'. So to write 'the exchange rate increases...' is ambiguous. So - write about the price (or value) of a currency rather than an exchange rate, eg 'the value of the USD fell by 25%...'

Advantages of a strong currency include reduced import costs, inflationary discipline, improvement in the terms of trade, and increased purchasing power ie can buy more imports. **Disadvantages of a strong currency** include increased import penetration (from other countries), exports are less competitive against other countries' exports, economic growth less likely.

Fixed exchange rate regimes / systems operate like buffer stock schemes. The government aims to keep the market price (exchange rate) at a particular level (or within a particular range) by buying and selling currency to make up a shortfall (and so prevent a price increase) or to buy up a surplus (and so prevent a price fall). To do this the government requires (a) sufficient currency reserves to buy surpluses and (b) certain knowledge that the exchange rate will change back in its favour. If the government's fixed currency price is below the real market rate a black market is likely to occur.

Depreciation / appreciation refer to floating exchange rates. Devaluation / revaluation refer to fixed exchange rates.

Advantages of floating exchange rate regimes include: not needing foreign reserves, monetary policy is free to determine a domestic interest rate (rather than to try to manipulate the exchange rate), the balance of payments

automatically balances, there is reduced risks of large scale speculation (esp. important for small or developing countries).

Advantages of fixed exchange rate regimes include: greater control over inflation (because a considerable amount of inflation results from import prices esp. oil), greater certainty over prices / revenue for exporting / importing business, and reduced costs of speculation / hedging against exchange rates fluctuations for businesses (and government).

The Balance of Payments and (Fixed) Exchange Rates – at the same time.

A devaluation (NB fixed exchange rate regime) of the exchange rate will make exports more competitive and imports more expensive (and vice versa).

Normally devaluation would (eventually) improve a country's balance of payments situation (import costs versus export revenue) but it may make the situation worse. The overall or net result of a devaluation will depend on elasticities.

$$AD = C + I + G + (X - M)$$

An increase in export revenue (X) will increase AD. An increase in spending on imports (M) will decrease AD. A country that has a high tendency to import (a high marginal propensity to import) will import more as AD increases and this will exacerbate (worsen) a balance of payments deficit.

Countries with fixed exchange rates cannot rely on a depreciating (floating) currency to improve export competitiveness so it may have to consider protectionist policies.

Other policies may have to promote / encourage **expenditure-switching** (from imported goods to domestically produced goods) and **expenditure-changing** which aims to reduce AD. Supply-side policies may also be necessary to increase export-business' competitiveness.

Under a fixed exchange rate regime current account deficits can only be tolerated in the short term because the government needs foreign reserves to pay for the deficits. A country's competitiveness can be improved, and so a Balance of Payments deficit rectified by increasing productivity, reducing production costs, encouraging investment and innovation, stimulating competition and – devaluing its currency.

Think of Development Economics as the opportunity to apply both microeconomic and macroeconomic tools – PPFs, opportunity cost, supply & demand, elasticities, market failures, macroeconomic policies, AS / AD analysis, exchange rate analysis...

F. Development Economics

Economic growth is indicated by an increase in GDP. It is quantitative and so objective. **Economic development** is

indicated by an increase in the standard of living. It is qualitative and so subjective. Economies can experience positive growth, and, simultaneously negative development.

Economic Growth can be illustrated with an outward moving PPF (see p.1).

To be accurate, economic growth data should account for inflation and population changes. Changes in real GDP per capita is more useful data than simply changes in GDP.

Economic development is indicated by:

- real GDP / GNP per capita (but this is a national total and doesn't consider distribution of income)
- distribution of income (and wealth)
- birth rates, death rates, life expectancy, & population growth
- literacy rates
- energy consumption per capita (ie calories consumed per person)
- urbanisation.

The **HDI (Human Development Index)** is a composite indicator that combines GNP per capita, life expectancy and literacy rates and shows that growth does not always mean development. Some countries with a high GNP have a low HDI.

Sources of development. (Where does development come from?)

Natural Environment Factors Agriculture, especially when technology / industrialisation is added, usually yields export earnings and employment opportunities. However, the law of diminishing returns applies (because there is a finite supply of agricultural land. Weather is a significant factor as is the price of (often imported) technology, pesticides and seeds.

People An expanding population is not enough for an economy to develop. The people must be educated and they must be healthy. Investment in education and health has an opportunity cost – resources used for this now can't be used for other immediate uses. They are both long-term investments. An entrepreneurial / risk-taking attitude is important for new businesses to start up. Often cultural / religious / social barriers hinder the use of new technologies and work practices eg attitudes toward women.

Technology Investment (the purchase of capital goods) has an opportunity cost of foregoing present consumption. Investment means poverty will be reduced – but in the future and sometimes at the cost of immediate relief.

Institutional / structural factors Investment cannot take place without saving. Saving requires a surplus to have been created. Also, financial institutions have to be in place for people to deposit savings and for investors to borrow funds – and people must have confidence in these institutions.

Strategies for Development (How can development be initiated?)

Aid and Trade Bi-lateral aid (between two countries ie from one to another), and multi-lateral aid (from many

countries through an agency such as the World Bank). NGOs (non-government organisations) also contribute aid. Despite all the publicity, aid represents less than 2% of most LDCs' GNP.

Tied aid is very common. Rather than cash, donor countries sometimes give output from the donor country, which may have been available from within the LDC anyway.

Trade is better. Most LDCs' comparative advantage is in primary produce – agriculture, forestry or minerals. But – developed economies dominate the world's economy. The EU and the US continue to protect their primary industries to the extent that LDCs cannot compete. Until sufficient surpluses are created from primary production, investment is very difficult. Investment is necessary for economies of scale and to increase productivity and to increase competitiveness.

Foreign Investment can help LDCs that are struggling to become more than subsistence producers. MNC (multi national companies) and TNCs (trans national companies) invest in capital goods and also bring 'western' practices such as human resource management, entrepreneurship... There is a multiplier effect as employees' incomes circulate within the local economy. MNCs have been criticised for exploiting cheap resources (esp. labour) and adopting unsafe or unhealthy practices that are unacceptable in their own countries. Some also argue that development damages local cultures and that inequalities between MNC-employees and non-MNC employees are unacceptable.

Some countries adopt closed, inward-oriented strategies, impose tariffs on imports, offer subsidies to producers / employers esp. in manufacturing / export industries, and deny access to MNCs. Growth and development in these countries is much slower.

Free market vs Command or Centrally Planned Economic Systems Centrally planned economies came about because of market failures (see p.4). In theory a centrally planned / command economy can be effective but actual examples have been unsuccessful because of weak governments, corruption, conflicting personalities, leadership issues etc. Some of these planned economies have changed to free market economies – and in doing so, have experienced great difficulties. For a free market to operate effectively there must be: stable government, law & order, property rights, a stable currency, trust in financial institutions, a certain culture among the population, and social mobility. (NB there are no free market economies – they are all mixed – a mixture of traditional, planned, and free market).

The IMF (International Monetary Fund) operates as a banker for LDCs. Deposits come from developed countries and the funds may be distributed as loans to developing countries – with conditions relating to sound economic reforms.

The World Bank encourages economic growth and development through loans for investment, and economic advice. Recently loans have been granted to LDCs but with

profound structural reform conditions eg a requirement to privatise state owned assets and to reduce spending on military defence. The World Bank is often criticised as being too political.

OPEC (Oil and Petroleum Exporting Countries) is a cartel – the members being several large oil exporting countries. The cartel fixes the oil price by fixing member countries' output levels – ie a quota. As a result there is often a world shortage of oil and the world price of oil is usually artificially high. This has been to the long-term benefit of OPEC members, most of whom were, at one time, LDCs.

Barriers to development Often the greatest barriers for a country are within – poor government, political instability, over-regulation / bureaucracy, traditional 'backward' thinking / practices / cultural norms, and inadequate infrastructure such as roads, rail, telecommunications, and shipping ports...

Protectionism by developed countries. The EU and the US openly support free trade but then impose tariffs to protect their own producers and apply subsidies to support them further.

Many LDCs have significant debts and these require significant interest payments before principal can be repaid. Debt reform / write off has been a recent topic of discussion by developed countries and the IMF and World Bank. Many debts and debt-repayment difficulties seem to be the result of poor government, political instability, and poor economic management. Economic reforms imposed on LDCs before debt relief is considered have often had significant social implications.

Negative aspects of development

Resource depletion, deforestation, soil erosion, species loss, water and soil degradation, hazardous wastes, slum suburbs, air pollution... Unequal distribution of income and wealth. (Whether it is inequitable is a subjective issue.)

Sustainable Development means short-term economic growth does not compromise an economy's long-term ability to satisfy its needs.

Sustainable development requires: the government provision of clean water and sanitation; the creation of property rights; the regulation and control of polluting activities; tradable pollution rights (implying some pollution is acceptable), education of farmers / all producers; education / information provided to consumers; family planning & healthcare; free world trade.

These are not just strategies for LDCs - even many developed economies are not adopting sustainable practices.

They're 'Less Developed Countries' or 'Developing Countries'. Don't call them 'poor countries'.

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